

Use of modern technology in rural development: A case study of National Rural Employment Guarantee Scheme in Odisha

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It has been observed that only rural development can take off India from a developing to developed state. For this purpose, the Government of India has been introducing various rural development schemes/plans during five yearly plan periods, since independence. An introduction of any plan/scheme is not the end; its successful implementation is the right approach to achieve the targeted goal. The introduction of National Rural Employment Guarantee Scheme (NREGS) in the Tenth Plan, through a parliamentary act is one such big scheme which is operational till date in all part of India. Now, questions arise whether this very alluring scheme is being rightly implemented and whether the scheme requires a greater degree of monitoring for successful implementation. The present study is an attempt to find any lacunae in the implementation of the scheme at the grass root level such as a Block or Panchayat level and to suggest policy measures to enhance the quality of applicability of the scheme.

The actual process flow and implementation at the grass root level needs to be studied in detail. Since the financials and the number of stakeholders involved are huge, it becomes all the more important that we study the process to find out flaws, if any, and also to suggest any procedural changes required to streamline the process.

The present process flow of disbursement of funds in Odisha

The central government is the chief sponsorer of the program. Funds are allocated to each and every state in terms of works being undertaken and the projection of work that has been done. The block for the entire village panchayats under it collates the data with regards to the details of the various projects. The block's data are collated, the district's data is made, and all the districts data are collated for arriving at the state's figure. In Odisha, the Department of Panchayati Raj is the nodal department for the said project. A secretary heads the department. We

have a position called “Director (Special Projects)” who is in charge of the said scheme under the Department of Panchayati Raj.

The process flow in details is as follows:

- a. The local Panchayat Office/Block Development Officer chooses the number of projects that would be done in the villages of a particular panchayat. The said project is sent to the Collector of the district for approval, who is the project director of all projects within the district. The project is submitted online and the approval from the collectorate is also obtained online. A specific job code is generated for each project after approval (after technical and financial sanctions, as they call it).
- b. It is presumed that job cards have been allotted apriori. This is allotted to all adults in a household after getting the certificate from the village Sarpanch.
- c. The Junior Engineer makes the financial estimate of the said project(s). This would have been made in the previous year also while submitting the panchayat-wise demand for financial sanction but it has to be re-visited for the sake of inflationary or other financial changes within a year.
- d. After the necessary approval(s), the announcement of the said program is made across villages and job-card holders are invited to participate in the said project. A list of interested people is drawn by the village officials from those who register. The people who apply are also registered against the specific code as mentioned in point a above. This information is also uploaded on the website of the scheme, which is visible to the national decision makers as well as those of the state.
- e. The data entry of the interested people is done manually. The process involves signing of a muster-roll sheet by each interested laborer. The village chief also verifies the same. The progress of the work requires daily monitoring, updating of man-days / work-in-progress in the muster-roll data.
- f. An edifice is created on the spot where the actual work takes place detailing the name of the project, number of people involved, cost of the project and the duration of the project.

- g. Job commences and the work is regularly monitored and involvement of the requisite laborers is also checked and processed.
- h. The attendance of each and every day is maintained physically by the supervising officials who are basically the block/panchayat level officers.
- i. Payment is done every eighth day for the entire work done till that day. This is as per the records submitted and updated by the officials. However practically, no such payment actually takes places. All payments are done only after the completion of the project. The website of the scheme is updated every eighth day stating that the payments has been made on a work-in-progress basis. A rough estimate is made with regards to the financials and the physical work done and it is entered in the system.
- j. After the due completion of the work, the physical verification is done. The engineer as mentioned in point c, verifies the physical completion of the work.
- k. Final payment to all the participants is done only after the completion of the work. Sufficient time delay takes place due to data entry in the system, certification of the junior engineer getting the due clearances and final approval of the collector and subsequently the advice reaching the block level.
- l. Upon the completion of all the processes mentioned above, the payment is issued in the form of cheques signed by the Block Development Officer and handed over to the village Sarpanch for onward delivery to the beneficiary villagers. These villagers have to go to the issuing bank, as these are bearer cheques where each of the beneficiaries has to be present in the bank to withdraw the money. The entire payment is handed to them in cash individually.

At the central level, government is very keen to continue the project. It wants to add more and more beneficiaries into the system. However the flaws mentioned above at the grass root level can severely deter the further prospect of government's motive. It is highly recommended that these are addressed immediately and necessary checks are put in place so as to mitigate any further occurrence of the said or newer problems.

Proposed method of disbursement

The methodologies described above and the problems associated with each are typical to each and every state of the country. Each nodal officer (Collector in the case of Odisha) tries to find out the best possible way of minimizing the problem. Various efforts that have been used are as follows:

- a. Opening up of the scheme account with post-offices along with the beneficiary accounts. Post-offices have a better spread than banks in rural India. They have their own savings bank system. This reduces the distance factor to some extent but the problem of handing out/disbursing cash remains.
- b. Not only post-offices but bank branches were also used to open no-frill accounts of the beneficiaries. But this led to complications in account management and reconciliation for the state government, as no single bank covers the entire geographical spread of a block. When one bank catered to a part of the area, another bank catered to another part of the block. Besides this, the cash handling as mentioned above was also a problem. Another fundamental problem associated with no-frill accounts is the *no-frill services*. The banks are least bothered about servicing or addressing the queries/requirements of these clients.
- c. The state machinery is used to transport cash to the requisite branch. This reduces the cash problem of the respective branch, but it does not take care of the identification/wrong credit to any beneficiary. This is not a foolproof method as this cannot be handled by the government officials every time; there are many projects running under a Block Development Officer's jurisdiction making it impossible to cater to all.
- d. Engage one senior person of the village to liaison with the bank officials for quicker arrangement(s) of cash.
- e. Giving top priority to the project sanction, approval for payment and final certification of all projects under NREGS. The Collector has multiple functions but this one is given priority. This reduces the total delay to some extent but cannot help in mitigating the cash arrangement and disbursement problems.

It is evident, despite the interest of the people involved, the payment is delayed. So we have to go beyond the traditional mode of thinking and

doing things. The proposed scheme involves the smart use of technology. We are talking of smart use of technology for (a) electronic disbursement of funds, (b) linking of relevant information to NREGA server, and (c) online monitoring of day-to-day progress.

The Committee on Suggesting a Framework on Electronic Benefit Transfer has proposed a framework towards the first part (April 15-2008). It may be noted that any use of technology and development of a subsequent sustainable model in this segment has certain nuances and requirements, which need to be taken care of. The following points are noteworthy:

- a. The model should address the problem of geographical spread.
- b. The model should be financially attractive for any entity which takes over the same; government/statutory implementing bodies should not enforce charity or corporate social responsibility as the garb for undertaking this project. The scale of operations/model should either have a regular profit (in a mutually agreed transparent manner as the entire investment would be routed through the government's corpus) or have a model wherein profit is reaped on a long-term approach either on scale or through quick breakeven or any other complex fuzzy logic/framework/model. This suggestion is made keeping in mind the long term running of the project and usage of the best people, best system and the best technology for the same. It is for sure that in this world of business, any entity who undertakes the usage of technology and relevant people should have a recurring inward cash flows atleast for few seasons.
- c. It should encompass the typicalities of the complex transactional requirement of the general rural masses who are uneducated, do not know much of banking but the right to speed of transaction(s) is as high as that of any other urban community/individual. The system used also should be scalable to accommodate multitude number of beneficiaries.

The proposed model involves usage of handheld devices with GPRS enabled connectivity. A schematic representation of the device is attached below. This would act as a connector to information held in distant server of banks. This is to be used by Banking Correspondents (BCs) hired by the approved banks. The model encompasses this indirect route through banks

primarily because of two reasons namely:

- a. There is involvement of delivery and deposit (read handling) of public money which requires statutory sanction from the regulators.
- b. There is a set of rules already existing for the banking sector in India; routing the system through banks does not entail establishing fresh set of rules.

The detailed process flow is as follows:

- a. The bank, which is chosen by the Department of Panchayati Raj in joint consultation with the Reserve Bank of India, has to choose a Banking Correspondent (BC) to handle the process. They would be the extended arms of the respective banks. The nearest branch (from the place of work) would be the nodal branch for the respective BC. The BC would be directed by the official(s) of this branch for handling the project(s) being handled close to the branch. *The important names providing technical consultancy in this line are FINO & ALW.*
- b. The BC has to first identify the villages where the projects are going to come. They would have to cover the villages and check out the exact details of the job cardholders. A thorough KYC check needs to be done for all the individuals. The bank officials can guide the BCs to check out and record specific demographic aspects of the individuals. KYC check is required to open bank accounts.
- c. This seems to be a typical thing which was earlier being done anyway by the bank official(s) when the beneficiaries used to approach them for opening no-frill accounts as mentioned earlier. The technical aspect comes in the form of record of thumb impressions and the images getting embedded in a chip based smart cards. These smart cards are compatible to the handheld devices.
- d. The smart card is issued to the beneficiaries upon proper KYC check and the fingerprint details are permanently stored in the chip. Each card number is numbered and this numerical value is marked to the bank account of the respective individual.
- e. Here there is no requirement of certification from any individual be it the Sarpanch or any government official. In Odisha each villager has

now got an` Election Commission's voter identity card (courtesy the electronic voting methods) which can be used as a base document to issue a smart card.

- f. Once issued, the said cards are handed over to the respective individuals. Now when the beneficiary wishes to enroll for a particular project, he/she has to punch in the details into the biometric smart card reader. All such individual card details are thus punched in to the system. The BC has to carry the information to the block officials. They need to download the data and convert it into a particular format for onward updation in the NREGS server.
- g. When the job begins, the card reader may be used to take care of daily attendance. A BC has to reach the site for just keying in the details of the people working in the site. A surprise visit may be arranged in mutual coordination between the government officials and the bank's branch to bring in a further degree of transparency. Each day, these data are also keyed in to the main server. In the back-end an auto counter is on with regards to the number of days an individual is getting work. Based on the same, a cumulative payable amount against his/her name is generated. For example, the rate of digging soft soil is INR 145 per day (INR 160 for hard soil and INR 250 for laterite soil) per 100 cubic feet and if suppose a person has already worked for 3 days, a payable amount of INR 435 should be generated for that individual.
- h. On the seventh day of completion of work, a system-generated communication goes to the Collectorate advising the officials for generating the payment. Upon receipt of such a communication, the necessary information may be passed on to the block officials for generation of necessary advice to the bank. It is presumed out here that the bank's branch, which maintains the accounts of the beneficiaries, also maintains the money provided by the Central Government for the said project under NREGS. The block officials need to inform the bank to transfer the money to beneficiary account. The advice needs to be necessarily given in a soft format for immediate upload by the bank.
- i. When the bank completes the transfer of requisite funds from the project's accounts to the beneficiary accounts as per the advice

received from the block official(s), the BCs may be advised to carry on their next level of activity.

- j. They need to carry cash to the point of work. This may be done the next day i.e. eighth day. The quantum of cash would be determined by the amount of work that has been completed.
- k. At the point of work, they hold the smart card reader and check out the authenticity of the beneficiary by checking out the fingerprints. The details are checked online through the GPRS connector, which is in turn connected to the bank's server. Upon checking out the genuineness of the individual, the BC then asks for the option of withdrawal from the beneficiary. The beneficiary may choose to withdraw partly, fully, not withdraw at all, and deposit any amount. Depending upon the transaction (credit/debit), the necessary receipt is generated and handed over to the beneficiary. After returning to the bank's branch the necessary cash settlement may be done. Those days when these transactions are supposed to happen, the respective branch may be allowed to close a little later by their senior functionaries. At the bank level, these accounts may be specially isolated to allow such transactions.

We shall now check whether all the irregularities discussed above are routed out and the existing compliance to the rules of the scheme is met or not.

- a. The smart card shall check out the details of an individual like name, date of birth, father's/husband's name and prepare a unique combination number. This number is the digital signature of the individual. This cannot tally with any other individual's. Duplicity of cards in the individual names is ruled out. The family member's names are also tagged to any individual. Hence the chances of a family earning more than 100 days of employment in a year are ruled out. This would be checked by the system every time a request for payment is made.
- b. We have been discussing the case of fake entities making it to the muster rolls. If a system generated attendance is maintained, there are no chances of people making it into the payment list without actually carrying out work.

- c. No manual entry is undertaken resulting in lesser (read no) mistakes, time being saved with no duplicate data entries.
- d. The payment to the beneficiaries is quicker. They need not go to the bank to have their transactions done.
- e. Savings habit of individuals is generated. As the no-frill accounts are savings accounts, the beneficiaries are liable to get interest earning.

Odisha as a state has not yet utilised the said model. The benefits both societal and financial are discussed at length later during the course of the paper.

Summary and conclusion

This is an approach if applied at the grass root level will bring in transparency in the system, develop an integrity angle to the entire set of processes and ultimately bring in the sense of satisfaction to the actual workers. As we have mentioned in the course of the discussion, this satisfaction will cause the successfully strengthening the very motive of the project. The state government should rise to the necessity and accordingly chart out the selection of banks to carry forward the agenda in a time bound manner.

Odisha is now treated a backward state amongst its peers. As a whole, the state consists of 30 districts and 314 blocks. Imagine the amount of silent change which this process can bring in to 47,529 villages in the state of Odisha and the image it will be able to create amongst its peers.